



## Complete Summary

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### TITLE

Potentially harmful drug-disease interactions in the elderly: percentage of Medicare members 65 years of age and older who have a history of falls and a prescription for tricyclic antidepressants, antipsychotics or sleep agents.

### SOURCE(S)

National Committee for Quality Assurance (NCQA). HEDIS® 2009: Healthcare Effectiveness Data & Information Set. Vol. 1, Narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2008 Jul. 90 p.

National Committee for Quality Assurance (NCQA). HEDIS® 2009: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2008 Jul. various p.

### Measure Domain

#### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

#### SECONDARY MEASURE DOMAIN

Does not apply to this measure

### Brief Abstract

#### DESCRIPTION

This measure is used to assess the percentage of Medicare members 65 years of age and older who have a history of falls and a prescription for tricyclic antidepressants, antipsychotics or sleep agents concurrent with or after the diagnosis.

This measure is a component of a composite measure. Three separate rates and a combined rate are reported. The other two rates pertain to:

- Dementia and a prescription for tricyclic antidepressants or anticholinergic agents (see the related National Quality Measures Clearinghouse [NQMC] summary of the National Committee for Quality Assurance [NCQA] measure [Potentially harmful drug-disease interactions in the elderly: percentage of Medicare members 65 years of age and older who have a diagnosis of dementia and a prescription for tricyclic antidepressants or anticholinergic agents](#)).
- Chronic renal failure and prescription for non-aspirin NSAIDs or Cox-2 Selective NSAIDs (see the related NQMC summary of the NCQA measure [Potentially harmful drug-disease interactions in the elderly: percentage of Medicare members 65 years of age and older who have a diagnosis of chronic renal failure and prescription for non-aspirin NSAIDs or Cox-2 Selective NSAIDs](#)).

**Note:** Members with more than one disease or condition can appear in the measure multiple times (i.e., in each indicator for which they qualify).

## **RATIONALE**

Pharmacotherapy is an essential component of medical treatment for older patients, but medications are also responsible for many adverse events in this group. Almost 90 percent of people 65 years of age or older take at least one medication, significantly more than any other age group. Patient safety is highly important to member health, especially patients who are at increased risk of adverse drug events due to coexisting conditions and polypharmacy. Adverse drug events (ADE) have been linked to preventable problems in elderly patients, such as depression, constipation, falls, immobility, confusion and hip fractures. 30 percent of hospital admissions in elderly patients may be linked to drug-related problems or toxic effects.

## **PRIMARY CLINICAL COMPONENT**

Medication safety; history of falls; hip fracture; tricyclic antidepressants; antipsychotics; sleep agents

## **DENOMINATOR DESCRIPTION**

Medicare members 67 years of age and older as of December 31 of the measurement year and evidence of an accidental fall or hip fracture on or between January 1 of the year prior to the measurement year and December 1 of the measurement year (see the "Description of Case Finding" and the "Denominator Inclusions/Exclusions" fields in the Complete Summary)

## **NUMERATOR DESCRIPTION**

Members from the denominator dispensed an ambulatory prescription for a tricyclic antidepressant or an antipsychotic or sleep agent on or between the Index Episode Start Date (IESD) and December 31 of the measurement year (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

## Evidence Supporting the Measure

### EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

## Evidence Supporting Need for the Measure

### NEED FOR THE MEASURE

Use of this measure to improve performance  
Variation in quality for the performance measured

### EVIDENCE SUPPORTING NEED FOR THE MEASURE

National Committee for Quality Assurance (NCQA). The state of health care quality 2008: industry trends and analysis. Washington (DC): National Committee for Quality Assurance (NCQA); 2008. 131 p.

## State of Use of the Measure

### STATE OF USE

Current routine use

### CURRENT USE

Accreditation  
Decision-making by businesses about health-plan purchasing  
Decision-making by consumers about health plan/provider choice  
External oversight/Medicare  
Internal quality improvement

## Application of Measure in its Current Use

### CARE SETTING

Managed Care Plans

### PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

### LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

#### **TARGET POPULATION AGE**

Age greater than or equal to 65 years

#### **TARGET POPULATION GENDER**

Either male or female

#### **STRATIFICATION BY VULNERABLE POPULATIONS**

Unspecified

### **Characteristics of the Primary Clinical Component**

#### **INCIDENCE/PREVALENCE**

- One in 20 prescriptions filled by the elderly are for drugs classified as "always avoid"; more than 1 in 10 are for drugs that would rarely be considered appropriate.
- Studies have found that 21 to 37 percent of elderly patients filled at least one potentially inappropriate prescription and more than 15 percent filled at least two.

#### **EVIDENCE FOR INCIDENCE/PREVALENCE**

Curtis LH, Ostbye T, Sendersky V, Hutchison S, Dans PE, Wright A, Woosley RL, Schulman KA. Inappropriate prescribing for elderly Americans in a large outpatient population. Arch Intern Med 2004 Aug 9;164(15):1621-5. [36 references] [PubMed](#)

Simon SR, Chan KA, Soumerai SB, Wagner AK, Andrade SE, Feldstein AC, Lafata JE, Davis RL, Gurwitz JH. Potentially inappropriate medication use by elderly persons in U.S. Health Maintenance Organizations, 2000-2001. J Am Geriatr Soc 2005 Feb;53(2):227-32. [PubMed](#)

#### **ASSOCIATION WITH VULNERABLE POPULATIONS**

- The elderly face particular challenges in prescription drug use. Expenditures for prescription drugs in the U.S. are disproportionately high among those over 65 years of age. This population is twice as likely as others to experience adverse drug events and seven times as likely to be hospitalized.
- Seniors receiving inappropriate medications are more likely than others to report poor health status at a follow-up visit with their physician.

#### **EVIDENCE FOR ASSOCIATION WITH VULNERABLE POPULATIONS**

Families USA. Cost overdose: growth in drug spending for the elderly, 1992-2010. Washington (DC): Families USA; 2000. 2 p.

Fu AZ, Liu GG, Christensen DB. Inappropriate medication use and health outcomes in the elderly. J Am Geriatr Soc 2004 Nov;52(11):1934-9. [PubMed](#)

National Committee for Quality Assurance (NCQA). The state of health care quality 2008: industry trends and analysis. Washington (DC): National Committee for Quality Assurance (NCQA); 2008. 131 p.

## **BURDEN OF ILLNESS**

Studies link prescription of inappropriate drugs to higher risk of harmful side effects, hospitalization, increased length of illness, nursing home placement and falls and fractures that can hasten physical, functional and social decline.

See also the "Rationale" field.

## **EVIDENCE FOR BURDEN OF ILLNESS**

Families USA. Cost overdose: growth in drug spending for the elderly, 1992-2010. Washington (DC): Families USA; 2000. 2 p.

Fu AZ, Liu GG, Christensen DB. Inappropriate medication use and health outcomes in the elderly. J Am Geriatr Soc 2004 Nov;52(11):1934-9. [PubMed](#)

Gurwitz JH, Field TS, Harrold LR, Rothschild J, Debellis K, Seger AC, Cadoret C, Fish LS, Garber L, Kelleher M, Bates DW. Incidence and preventability of adverse drug events among older persons in the ambulatory setting. JAMA 2003 Mar 5;289(9):1107-16. [PubMed](#)

## **UTILIZATION**

See the "Rationale" field.

## **COSTS**

Unspecified

# **Institute of Medicine National Healthcare Quality Report Categories**

## **IOM CARE NEED**

Staying Healthy

## **IOM DOMAIN**

Safety

# **Data Collection for the Measure**

## **CASE FINDING**

Users of care only

## **DESCRIPTION OF CASE FINDING**

Medicare members 67 years of age and older as of December 31 of the measurement year who were enrolled as of December 31 of the measurement year with no more than one gap in enrollment of up to 45 days during each year of continuous enrollment and evidence of an accidental fall or hip fracture on or between January 1 of the year prior to the measurement year and December 1 of the measurement year

## **DENOMINATOR SAMPLING FRAME**

Patients associated with provider

## **DENOMINATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

Medicare members 67 years of age and older as of December 31 of the measurement year and evidence of an accidental fall or hip fracture on or between January 1 of the year prior to the measurement year and December 1 of the measurement year

Refer to the original measure documentation for steps to identify the eligible population.

### **Exclusions**

Exclude members with a diagnosis of psychosis (refer to Table DDE-B in the original measure documentation for codes to identify psychosis) on or between January 1 of the year prior to the measurement year and December 1 of the measurement year.

## **RELATIONSHIP OF DENOMINATOR TO NUMERATOR**

All cases in the denominator are equally eligible to appear in the numerator

## **DENOMINATOR (INDEX) EVENT**

Clinical Condition  
Encounter  
Institutionalization

## **DENOMINATOR TIME WINDOW**

Time window precedes index event

## **NUMERATOR INCLUSIONS/EXCLUSIONS**

### **Inclusions**

Members from the denominator dispensed an ambulatory prescription for a

tricyclic antidepressant (refer to Table DDE-C in the original measure documentation) or an antipsychotic or sleep agent (refer to Table DDE-D in the original measure documentation) on or between the Index Episode Start Date (IESD)\* and December 31 of the measurement year

*\*IESD:* The earliest diagnosis, procedure or prescription between January 1 of the year prior to the measurement year and December 1 of the measurement year. For an outpatient claim/encounter, the IESD is the date of service; for an inpatient claim, the IESD is the discharge date; and for dispensed prescriptions, the IESD is the dispense date.

### **Exclusions**

Unspecified

### **MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

### **NUMERATOR TIME WINDOW**

Fixed time period

### **DATA SOURCE**

Administrative data  
Pharmacy data

### **LEVEL OF DETERMINATION OF QUALITY**

Individual Case

### **PRE-EXISTING INSTRUMENT USED**

Unspecified

## **Computation of the Measure**

### **SCORING**

Rate

### **INTERPRETATION OF SCORE**

Better quality is associated with a lower score

### **ALLOWANCE FOR PATIENT FACTORS**

Unspecified

**STANDARD OF COMPARISON**

External comparison at a point in time  
External comparison of time trends  
Internal time comparison

**Evaluation of Measure Properties****EXTENT OF MEASURE TESTING**

Unspecified

**Identifying Information****ORIGINAL TITLE**

Potentially harmful drug-disease interactions in the elderly (DDE).

**MEASURE COLLECTION**

[HEDIS® 2009: Healthcare Effectiveness Data and Information Set](#)

**MEASURE SET NAME**

[Effectiveness of Care](#)

**MEASURE SUBSET NAME**

[Medication Management](#)

**DEVELOPER**

National Committee for Quality Assurance

**FUNDING SOURCE(S)**

Unspecified

**COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE**

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

**FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST**

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency



and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

## **ADAPTATION**

Measure was not adapted from another source.

## **RELEASE DATE**

2006 Jan

## **REVISION DATE**

2008 Jul

## **MEASURE STATUS**

This is the current release of the measure.

This measure updates a previous version: National Committee for Quality Assurance (NCQA). HEDIS 2008. Healthcare effectiveness data & information set. Vol. 2, Technical specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2007 Jul. various p.

## **SOURCE(S)**

National Committee for Quality Assurance (NCQA). HEDIS® 2009: Healthcare Effectiveness Data & Information Set. Vol. 1, Narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2008 Jul. 90 p.

National Committee for Quality Assurance (NCQA). HEDIS® 2009: Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications. Washington (DC): National Committee for Quality Assurance (NCQA); 2008 Jul. various p.

## **MEASURE AVAILABILITY**

The individual measure, "Potentially Harmful Drug-Disease Interactions in the Elderly (DDE)," is published in "HEDIS® 2009. Healthcare Effectiveness Data & Information Set. Vol. 2, Technical Specifications."

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: [www.ncqa.org](http://www.ncqa.org).

## **COMPANION DOCUMENTS**

The following is available:

- National Committee for Quality Assurance (NCQA). The state of health care quality 2008: industry trends and analysis. Washington (DC): National Committee for Quality Assurance (NCQA); 2008. 131 p.

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Telephone: 202-955-3500; Fax: 202-955-3599; Web site: [www.ncqa.org](http://www.ncqa.org).

## **NQMC STATUS**

This NQMC summary was completed by ECRI Institute on April 18, 2008. The information was verified by the measure developer on May 30, 2008. This NQMC summary was updated by ECRI Institute on March 20, 2009. The information was verified by the measure developer on May 29, 2009.

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